

CLAIMS

What is claimed is:

1. A sheet, comprising:

- (a) a nonwoven fabric of short high tensile
5 modulus fibers; and
(b) a thermoplastic polymer having a low
moisture absorption;

said sheet having an apparent density which is at least about 75% of its calculated density.

10 2. The sheet as recited in claim 1 wherein said apparent density is at least about 90% of its calculated density.

15 3. The sheet as recited in claim 2 wherein at least some of said high tensile modulus fiber is coated or encapsulated by said thermoplastic polymer.

4. The sheet as recited in claim 3 wherein said thermoplastic polymer is selected from the group consisting of perfluoropolymers and liquid crystalline polymers.

20 5. The sheet are recited in claim 4 wherein said thermoplastic polymer is a liquid crystalline polymer.

6. The sheet as recited in claim 5 wherein said high tensile modulus fibers are an aramid.

25 7. The sheet as recited in claim 6 wherein said organic fibers are an aramid.

8. The sheet as recited in claim 4 wherein said high tensile modulus fibers are an aramid.

9. The sheet as recited in claim 2 wherein said high tensile modulus fibers are an aramid.

30 10. The sheet as recited in claim 1 wherein a tensile modulus of said sheet and a thermal coefficient of expansion of said sheet, in a machine direction of said sheet is within about 20% of a tensile modulus of said sheet and a thermal coefficient of expansion of said

sheet, respectively, in a transverse direction of said sheet.

11. The sheet as recited in claim 1 wherein said thermoplastic polymer absorbs no more than about 0.25
5 weight percent of moisture.

12. A laminate comprising:
the sheet of claim 1 and
at least one metal layer contacting one
surface of said sheets.
- 10 13. A circuit board comprising the sheet of claim 1.
14. A process for the production of a solid first
sheet material, comprising the steps of
heating and applying pressure to:
(a) a multilayer sheet structure, comprising,
15 at least one layer containing a nonwoven fabric of short
high tensile modulus fibers, and at least one other layer
that comprises a thermoplastic polymer having a low
moisture absorption;
to form a first sheet having an apparent density of
20 at least about 75% of its calculated density.

15. The process as recited in claim 13 wherein said apparent density is at least about 90% of said calculated density.